SECONDARY EDUCATION ACTIVITY
Активности во средното образование

SEA PROJECT
SECONDARY EDUCATION ACTIVITY

MODULE 4

LEARNING
IN THE WORKPLACE

Teacher
Development Component

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USAID
FROM THE AMERICAN PEOPLE

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SECONDARY EDUCATION ACTIVITY
АКТИВНОСТИ ВО СРЕДНОТО ОБРАЗОВАНИЕ

American Institutes for Research
and
International Reading Association

MODULE 4:

LEARNING IN THE WORKPLACE

C o n t e n t s

Secondary Education Activity

SECONDARY EDUCATION ACTIVITY

I. THE PURPOSE OF THE MODULE

1. Why is this topic important?

The traditional way of teaching, based on accumulation of knowledge, still dominates the existing educational system of the secondary vocational education and training in the Republic of Macedonia. On the other hand, the labor market sets demands for connecting theory and practice, and development of abilities and skills of the students.

This module will give the teachers an opportunity to plan and organize a teaching process that will enable the students to learn through performance. This method of teaching will enable the students to develop their skills, abilities, and working activities through direct performance of specific tasks that will provide them with a faster and more successful start on their working place. On the other hand, they will also reach a positive attitude toward the means of production; they will be skilled in solving problems and making decisions. The students will be capable of self-assessment by determined standards. This module will assist in students gaining quick employment after finishing the education.

2. How does the approach in this module compare and contrast with traditional perspectives?

In the teaching process, teaching and learning are done with two methods, by detecting knowledge and by teaching (or transferring) knowledge. Our system of education is dominated by elements of the teaching method with a tendency for transfer to the method of knowledge detection. This is especially important for the secondary vocational education and training since it is more natural, closer to the real needs of the young people educating themselves, and more like their everyday problems and solutions. On the other hand, in order

to organize active, problem-solving, developing, and researching a way of teaching, directed toward the student, the means of teaching should provide opportunities for developing cooperation and independence. In order to organize this way of teaching, the teacher should prepare a methodical variety and be flexible, as well as respect student's needs and learning abilities.

Module 4 is addresses this type of teacher training, such as how to organize teaching that "fits the student perfectly" to develop students' abilities and skills through "learning in the workplace." The emphasis is on the improvement of the teaching process by numerous transitional forms or combinations of traditional and modern techniques.

Accepting the tendency for transferring from the traditional to the modern way of teaching, this module is dominated by elements of the modern way of teaching and differs from the traditional by the following:

- Active participation of the student during the learning process.

- The demonstrative teaching means are used as working means.

- The method of work is changed from informative-receptive and reproductive to problem-solving and researching.

- Working discipline based on involving the student in specific tasks.

- Development of skills is stressed more than accumulation of knowledge.

- Setting up problems and finding solutions for them.

- Examination and assessment directed towards the process and places emphasis on the quality of the meaning.

- Students develop entrepreneurial spirit and self-initiative in searching for a job (Popovski, 1996).

3.   *How does this topic fit within a quality improvement framework?*

The content of this module is closely connected to the orientation of the secondary vocational education and training to educate professional staff that will respond to the current and future labor market needs. However, the existing educational system in the vocational schools is primarily based on theoretical knowledge. On the other hand, the employers, as direct users of the services of the secondary vocational education, emphasize that their employees with completed secondary vocational education lack knowledge, skills, and abilities for direct involvement at the working post. In order to improve the practical knowledge and skills of the students, we must develop a teaching process that will provide direction towards problem solving, research, and other active learning and teaching strategies.

This model will help the participants on the seminar in planning and organizing a teaching process that will enable students to accomplish the given tasks and be more flexible towards the changes. This will ease students' efforts to engage in the labor market and to fit in the working environment after they graduate from secondary school.

This module should provide the following main qualitative changes: setting up standards for performance and self-assessment, reaching the desired (not the minimal) level of performance, planning the steps for performance, and improving flexibility in the work place and tasks.

4.   *What are the key practical skills and competencies expected to result from participation in this workshop module?*

After the workshops planned for this module, the teachers from the secondary vocational schools will be able to:

- Help students in developing their skills and habits for keeping a learning log, to create it and register all important key issues for specific situations;

- Create a situation in which the students will master the content through playing a role;

- Determine a work situation in which the students will have active participation in the assessment of their own accomplishment and recognition of good and bad results and also how to raise the standard of the performance; and

- Teach the students how to read and understand tables, schemes, graphics, and diagrams, and how to express the results with these tools and build them in the text.

II. CHARACTERISTICS AND NEEDS OF THE ADOLESCENT LEARNER

The information in this module is consistent with research on the needs of the adolescent learner. Understanding the needs of the adolescent learner is essential for developing effective instruction that meets these needs.

Adolescents are at a stage of life where they are undergoing many changes. These changes include the physical, social, emotional, and intellectual. Piaget (1969) described the progression in cognitive processes as a change from **concrete operations** to **formal operations,** a change from a concrete to an abstract way of thinking about the world.

With their ability to manipulate and understand abstract concepts, adolescents can formulate general rules about the world and then test them against available facts. They can speculate about alternative possibilities, can reason in hypothetical terms, and can understand analogies and metaphors. However, numerous studies have shown that a sizable percentage of adolescents don't reach the stage of formal operation. As Cowan (1978) points out, since the majority of secondary school students have not fully reached formal operational thought, it would be a mistake to assume that hypothetical, logical instruction should entirely replace the use of concrete examples and personal experiences. Thus, active learning environments are essential for this age group.

Each youth is a unique individual, yet also a member of one or more groups (Sturtevant and Linek, 2004). For example, each young person is part of a family and may also belong to a club or religious organization. He or she may also identify with other youth who have interests such as dance, woodworking, or electronics. All youths need to learn many new social and academic skills in preparation for the future.

As part of their growth toward adulthood, all adolescents need to consider many life vocations and opportunities. They need to develop skills and attitudes that will help them grow into responsible adult family members, workers in a market economy, and citizens in a democratic society. School programs that help adolescents develop skills in collaboration, communication, problem solving, decision making, self-assessment, critical thinking, research skills, and leadership abilities are very important.

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III. DEMONSTRATION ACTIVITY 1

Using Visuals for Completing Tasks and Comprehending Texts
Total time estimate: 2hrs 45 minutes

Overview:

SUMMARY OF ACTIVITY FOR USING VISUALS

Phase 1. Activating Background Knowledge (15 minutes)
- Teacher invites participants to reflect with a partner and then recall for the group any personal experience with using a visual aid when doing work or solving a problem.
- Teacher next leads a discussion of ways participants have used visual aids in their teaching.
- Teacher writes on a flip chart all types of visual aids participants have used.

Phase 2. Constructing Meaning (1 hr. and 30 minutes))
- Teacher displays several visual aids on transparencies (such as charts, graphs, tables, timelines, photographs, diagrams) and gives a brief explanation of each aid. (Appendix 1-A).
- Teacher divides the participants into groups of four, and then divides each group in two pairs (pair 1 and pair 2). One pair is given a task, to compose a tangram (Appendix 1-B) using a scheme (a paper diagram of the completed tangram). Pair 2 must compose it without a scheme. At the end of the activity, the time used for all group to compose with a scheme vs. those without a scheme is compared.
- Participants then create visuals from texts in their own subject areas, share with others, and discuss the benefits and difficulties.

Phase 3. Evaluate and Apply, Review, Guided Practice (1 hr.)
- Participants think about their visuals and make changes based on what they have learned.
- Teacher asks the participants to share their assessment with the others, to explain what was successful and what wasn't and to explain why they would change something in their visual (if they wish to make changes).
- Participants make a second visual to use in their teaching, or, they create a text by looking at a visual. They share with others and discuss additional applications of visuals.

Objectives:

As a result from this Activity, the participants will be able to:

1. Learn ways to create and use visual aids (manuals, memos, diagrams, etc);

2. Learn how to read visual aids (manuals, memos, diagrams, etc); and

3. Learn how to connect visual aids to text.

As a result of this activity, participants will gain experience and will contemplate on the following themes from the module:

- ✓ Collaboration
- ✓ Communication
- ✓ Problem solving/Decision making
- ✓ Self-assessment
- ✓ Critical thinking
- ✓ Research
- ✓ Leadership

PHASE 1: Activating Background Knowledge (15 minutes)

1. Ask the participants to recall personal experiences using a visual aid to solve a problem or complete a task. Ask them to discuss with a partner examples from everyday life such as the installation of a TV aerial or device, replacing a part from a car or other device, putting on a tie, starting up a household device, etc. Invite a few participants to present their personal experiences in front of the other participants. *Ask whether they thought the visual aid assisted in completing the work. (If yes, ask them to explain how and why; if no, ask them to explain what problem may have occurred with the visual aid).*

2. Participants (whole group) are next given the direction to think of using visual aids in their practice when teaching their subject. Ask questions like: *Do you use visual aids in your practice? In what ways? What problems do your students encounter when reading a visual aid? What helps them the most when reading a visual aid? How do you think using visual aids helps students learn?*

3. A few participants explain their experiences and the teacher writes down on a chalkboard or flipchart forms of visual aids the participants say they have used in their teaching.

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PHASE 2: Constructing Meaning (1 hour and 30 minutes)

1. Use transparencies to show five types of visual aids: tables, graphs, diagrams, maps, and timelines. Give a brief explanation of each visual aid (Appendix 1-A). As you show these transparencies, refer students to the copy in the back of their manual. Explain that visual aids often help students remember information and complete tasks, but that different visual aids are more appropriate for different texts and subject areas.

2. Using a visual to complete a task.

    a. Next, divide the participants in groups; divide each group into two pairs (pair 1 and pair 2). It is helpful if the partners teach the same or a similar subject. Give pair 1 the task to compose a tangram (Appendix 1-B) using a printed scheme (diagram); give pair 2 the same task but ask them to complete it without giving them a scheme to work from. Give the participants instructions to write down the time they began this activity and then their end time and to compute the amount of time spent to complete the task. Then give them a sign to start. [Each pair will receive a set of tangrams (parts cut along the lines of the scheme) created out of cardboard that matches the scheme in Appendix 1-B; only one of the pairs will receive the scheme to look at while doing the task.]

    b. While the participants are working, divide the chalkboard or chart paper into two halves. As the groups finish, in the left half write down the amount of time the first pair (who used the scheme) took to complete the task and on the right, write down the time the pair 2 (who didn't use a scheme) took to complete the task.

    c. When all pairs have completed the task, calculate the total time from both of the columns; compare the time taken for all pairs to complete the task with and without a scheme. If the groups with the visual completed the task faster (this is extremely likely), come to the conclusion that reading visual aids is very

important when completing a task. Explain to participants that their students can benefit from learning to read visuals when they have to make something or complete a task.

3. Creating visuals from text. [This part of the lesson will help participants create visuals they can use with text in their own subject area. It also will help them understand the importance of having their own students create visuals.]

   a. First, each pair of participants will write or select a short text from materials related to their subject area or a similar subject area. (It is suggested that participants bring copies of their textbooks or some other material related to their subject area; also, newspaper articles related to various content areas should be made available for participant use). The teachers should ask participants to *select a text that can be taught well with a visual.* After each pair selects or writes the text, they give it to the other pair from their group of four. The other pair then creates a visual for the text, using one of the types of visuals presented earlier (1-A). Participants should be asked to select the type of visual they think would work best with this particular piece of text. [Note: Creating visuals for text and matching types of visuals to types of text is a skill the participants will need when planning lessons for their own students.]

   b. Participants will work in partners until they complete the visual. They then will share with their own group of four.

   c. Each group will then share one of their two visuals (select one from their group) with the whole class, using either a transparency or chart paper. As each group shares its visual, the teacher should engage participants in a discussion on the difficulties they may have encountered in making decisions about what visual to use for what text. Also, *mention that it is very helpful to teach students not only to use teacher-made visuals, but also to learn to create their own visuals. Tell participants that the purpose of doing this would be to help students comprehend their reading more completely by engaging in creating a visual for it.* This type of task also helps students remember information from texts. Students can also be taught to write text from visuals.

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PHASE 3: Evaluating and Applying Information (1 hour)

After the whole group presentation, ask each group to reflect on their own creation of visuals and to assess the success of their task. Participants can discuss 1) *Did your visual clearly represent the text you selected? and 2) What other types of visuals could you have used that might have been just as appropriate or more appropriate?*

At the end, ask a few participants to explain what was successful and what wasn't and to explain if they had made any changes in the initial version of their visual. If there were any changes, ask the participants to explain why they were made. Encourage the participants to think about applying this strategy in their practice.

Reviewing the activity

1. Have the participants recall the steps of this strategy. Questions that may be asked to encourage the participants to reflect on the beginning of the strategy are: *What groups constructed the tangram faster? Why did the groups who received the scheme complete the task more quickly? Did your group have any difficulties when reading the given scheme?*

2. After you recall the steps for the introductory part of the strategy, go back to the main part of the lesson. Questions that may be asked: *Was your visual aid effective for representing the text you chose? What made selecting or designing a visual easy or difficult? What types of texts need different types of visuals?*

3. At the end of the session, make an analysis of the participants' accomplishments, again by asking questions. *How successful was your work in pairs? What drawbacks did you encounter when completing the task in groups? Do you feel prepared to apply this strategy in your practice?* At the very end of the session, ask some of the participants to share examples of applying this or some similar strategy in their work.

Objectives:

Participants will:

1. Better understand the general structure of the role play;

2. Acquire knowledge about role playing as an instructional strategy;

3. Be able to design and create scenarios for role playing in their practice; and

4. Experience and reflect upon the following module themes:

   ✓ Collaboration

   ✓ Communication

   ✓ Problem solving and decision making

   ✓ Self-assessment

   ✓ Critical thinking

   ✓ Research

   ✓ Leadership

PHASE 1: Activating Background Knowledge (25 minutes)

The teacher introduces the topic and purpose of the activity. He or she asks participants to think about how they currently use creative, participatory teaching technique (such as simulation), games, and role playing:

- *How do you use these creative techniques as a part of your repertoire of teaching methodology?*

- *Please share with us some examples of how role playing is used.*

Participants work in pairs and then in their group share experiences that they have had with role playing. The teacher then asks representatives from groups to present their own examples. Finally, collaboratively examine benefits of using role playing.

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IV. DEMONSTRATION ACTIVITY 2

Role Playing

3 hours

Overview:

SUMMARY OF STRATEGY FOR ROLE PLAYING
Phase 1. Activating Background Knowledge (25 minutes) • Teacher introduces the topic and purpose of the activity. • Teacher asks participants to share some examples about how they currently use participatory teaching simulation techniques such as games and role playing. • Participants work in pairs and then in their group share the experiences that they have had with role playing. • Teacher asks representatives from groups to present their examples. • Collaboratively examine benefits of using role playing.
Phase 2. Constructing Meaning (35 minutes) • Teacher gives participants a brief introduction and explanation about role playing and benefits to students. • Teacher gives instruction for practicing role playing, demonstrates role playing exercise and ground rules for the simulation. • Teacher divides participants into small group of 3-4 to practice role playing. • Participants choose one of the following roles: salesperson, customer, or observer. • Participants read their part to prepare for role playing. • Participants practice role playing and teacher acts as a facilitator and mediator. • Teacher leads discussion with the whole group about what happened during role playing.
Phase 3. Evaluating and Applying (2 hours) • Teacher demonstrates the steps of role playing procedure. • Teacher divides the participants into groups of four by teaching area. • Teacher asks participants to work to identify ways role playing could be included in the curriculum. • Participant work on designing a scenario for role playing activities using the steps of role playing procedure. • The groups will present the methods of applying role playing in their practice. • Teacher asks participants to analyze and reflect the role playing simulations.

Objectives:

Participants will:

1. Better understand the general structure of the role play;

2. Acquire knowledge about role playing as an instructional strategy;

3. Be able to design and create scenarios for role playing in their practice; and

4. Experience and reflect upon the following module themes:

   - ✓ Collaboration
   - ✓ Communication
   - ✓ Problem solving and decision making
   - ✓ Self-assessment
   - ✓ Critical thinking
   - ✓ Research
   - ✓ Leadership

PHASE 1: Activating Background Knowledge (25 minutes)

The teacher introduces the topic and purpose of the activity. He or she asks participants to think about how they currently use creative, participatory teaching technique (such as simulation), games, and role playing:

- *How do you use these creative techniques as a part of your repertoire of teaching methodology?*

- *Please share with us some examples of how role playing is used.*

Participants work in pairs and then in their group share experiences that they have had with role playing. The teacher then asks representatives from groups to present their own examples. Finally, collaboratively examine benefits of using role playing.

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PHASE 2: Constructing Meaning (35 minutes)

The teacher gives participants a brief introduction and explanation about role playing and benefits to students. The teacher displays the following transparencies (Appendix 2-A and Appendix 2-B)

What is role playing?

- Role playing is a method for exploring the issues involved in a complex social situation. (Role playing in education.)

- Role playing simulation is a collaborative learning activity in which students are given a scenario, assume roles, and interact with each other in character (About role playing simulations.)

- Role playing provides social interaction as well as real life experiences, both of which are necessary if students are to construct meaning from their learning (Teaching Engineering to K-12 Student using Role Playing Games.)

What are the benefits of the role playing for students?

- Role playing can help students to become more interested and involved, not only learning about the material, but learning also to integrate the knowledge in action, by addressing problems, exploring alternatives, and seeking novel and creative solutions (Role playing in education.)

- Role playing is the best way to develop the skills of initiative, communication, problem solving, self-awareness, and working cooperatively in teams. These skills will help young people to be prepared for dealing with challenge in the "real world" (such as teamwork, collaborative learning, and effective communication). (Role playing in education.)

After the presentation teacher says: *Today we are going to practice role playing. First, I will explain the general procedure and scenario of the role play. In the following role playing simulation you will practice good customer service. Businesspeople have a lot of responsibility. They should pay attention to customers. As we think about starting a business, one of the most important elements to focus on in order to be successful is how we will satisfy our customers.*

Teacher continues to demonstrate role-playing exercise and ground rules for the simulation.

Teacher explains the handout about the background of the scenario (Appendix 2-C) and gives handouts to participants (How to Start and Operate a Socially Responsible Business).

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Background:

When you are selling your products, you need to do more than wait for the customer to tell you he or she wants to buy something. First, you will need to make the customer comfortable with your business, which is no easy task. Potential customers will want you to do a lot. They will want you to make change so they can buy a soda in the machine across the street. They will want you to listen to their problems. They will stop by your business without really knowing what they want to buy. If you respond to their needs, potential customers will become comfortable with you and will be more likely to buy your products.

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The teacher divides participants into small group of 3-4 for the role play simulation.

Participants choose one of the following roles: salesperson, customer, or observer.

Teacher says: *In the following role play exercise, the salesperson will need to practice four customer service behaviors: maintaining eye contact, asking questions, explaining how a problem will be solved, and teaching the customer about his or her product or service.*

Teacher distributes to the participants role play cards that describe the role the participant is to play (Appendix 2-D, 2-E, and 2-F) and explains: *Now you will read about your role and take a short time to prepare for the simulation.*

Salesperson:

You have started a pizza business. Because business is booming, you have hired a few people to work at the store when you are not available. You have just arrived at the restaurant and have been approached by one of your regular customers.

Customer:

"I was here yesterday to buy a slice of pizza. After I ordered, the sales clerk went into the kitchen and never come back. I waited for 10 minutes and finally left. I have been coming here every day for a while, and I've never experienced anything like this!"

the roles clearly, and your instruction must be very explicit. In this activity you will use the experience practiced during the previous exercise and the reading text in Appendix 2-I: "Examples of role playing simulations."

Teacher divides the participants into groups of four by teaching area: *We now have 30 minutes to work on designing the scenario.*

After 30 minutes the teacher explains to participants that the next step is to present the scenario of role playing that they designed.

After the group presentations, the teacher asks participants to analyze and reflect on the role-playing scenario. Teacher asks participants to consider these questions (Appendix 2-J):

- *What is the primary purpose of role-playing exercises?*

- *Why use role playing exercises?*

- *What you think about integration theory and practice through the role playing method?*

- *When do you think it would be most appropriate to use role playing?*

- *What are the benefits of role playing for students?*

Reviewing the activity (15 minutes)

Have participant review activities experienced during the Demonstration Activity of role playing. You may say: *Let's go back to the activities we have just completed:*

- *What was the first activity? What we did next?*

- *Why is so important to create a realistic scenario for role playing?*

- *What part of this activity was the easiest and why?*

- *What was the most difficult part of this activity and why?*

- *What are some potential problems with role playing?*

Guided Practice (45 minutes)

Teacher moves participants into groups by content area and says: *Now you will develop as possible role playing scenarios. On chart paper, write down as many possible simulations as you can develop in 20 minutes. When you are done, tape your chart to the wall.*

When all charts are on the wall, give participants 20 minutes to review all the role playing scenarios developed by the groups.

V. DEMONSTRATION ACTIVITY 3

Self-Assessment

(4 hours)

Overview

SUMMARY OF STRATEGIES FOR SELF-ASSESSMENT
Phase 1. Activating Background Knowledge (1 hour) • Introduce the topic and purpose of the activity. • Review the values of classroom-based assessments. • Guide participants through a self-assessment simulation. • Have participants reflect on the value of self-assessment. • Distribute an overview of student self-assessment. • Have participants remember ways students currently are involved in their assessments.
Phase 2. Constructing Meaning (2 hours, 15 minutes) • Distinguish two types of self-assessment: how students act and what students produce. • Have participants evaluate instruments for students to use when assessing how they act in classrooms and workplaces. • Have participants list work products that students can assess. • Have participants construct a rubric for students to use when assessing one product. • Have participants respond to an article that presents additional elements of student self-assessment.
Phase 3. Evaluating and Applying (45 minutes) • Have participants complete guide on planning for self-assessment. • Conclude with participants' responses to open-ended culminating questions.

Objectives:

As a result of this demonstration activity successful participants will:

1. Be able to explain how self-assessment contributes to active learning;

2. Be able to plan student self-assessment instruction; and

3. Experience and reflect upon the following module themes:

   ✓ Collaboration

   ✓ Communication

✓ Problem solving and decision making

✓ Self-assessment

✓ Critical thinking

✓ Research

✓ Leadership

PHASE 1: Activating Background Knowledge (1 hour)

1. Introduce this Demonstration Activity by saying: *Demonstration Activity 3 involves self-assessment. We will explore ways of having students judge for themselves how well they are performing. Like the Assessment Activity in Module 1, the emphasis here is on everyday instruments and practices that support teaching and learning.*

2. Begin this Demonstration Activity by saying: *Let's review the values of classroom-based assessments.*

    Display on the overhead the **first** question on Appendix 3-A, <u>Opening Questions,</u> and ask:

    - *Why is assessment an important part of the **teaching** process?*

    Have participants first share their responses at their tables, then have volunteers share with the whole group. (Recording the responses is unnecessary because this is a review and is only a general orientation to the Demonstration Activity.) Probe and support the responses as appropriate.

    Then display on the overhead the **second** question on Appendix 3-A and ask:

    - *Why is assessment an important part of the **learning** process?*

    Again, have participants first share their responses at their tables, then have volunteers share with the whole group. Probe and support responses as appropriate. Elicit from

volunteers or directly state the teaching and learning benefits of classroom-based assessment such as:

- clarifying classroom expectations,

- maintaining a focus on what is to be taught and learned, and

- providing feedback to teachers and learners so corrective action can be taken.

3. Now guide participants through a self-assessment simulation. Say: *To focus your thinking on self assessment—on having learners judge for themselves how well they are performing—we now will conduct a brief simulation. Imagine that you are very young again, that you are learning to print, and that your dominant hand (your right hand if you are right-handed) no longer can function due to some disease or accident. You need to print with your weak hand.*

Have participants use their weak hand (i.e., left hand if they are right-handed) to print their full names on any available piece of paper.

After participants print their names with their weak hands, distribute and display the handwriting rubric (Appendix 3-B, Handwriting Rubric), show how to use it, and have participants complete it by themselves.

After participants complete the rubric, have them share their weak-hand handwriting and rubric scores with a partner and work toward consensus on the scoring.

4. Have participants reflect on this self-assessment experience. Display on the overhead the **third** question on Appendix 3-A, Opening Questions, and say: *Now that you have been reminded what self-assessment with a rubric can be like, let's talk about it:*

- *Why is self-assessment an important part of the learning process?*

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Have participants first share their responses with their partners, then have volunteers share with the whole group. (Recording these responses is unnecessary because a handout containing key points will be distributed.) Probe and support the responses as appropriate. Elicit from volunteers or directly state the special benefits of student self-assessment such as:

- promoting self-reflection, self-awareness, and self-direction;
- engaging learners with subject matter specifics;
- clarifying the standards educators use;
- increasing personal responsibility; and
- enabling learners to internalize expectations.

5. Provide a written overview of self-assessment. Say: *The handout entitled* <u>*Overview of Self-Assessment*</u> *summarizes the ideas we have addressed so far. This handout is for your records.*

   Distribute the handout entitled <u>Overview of Self-Assessment</u> (Appendix 3-C). Allow time for participants to skim the handout.

6. Now address teachers' current practices relative to self-assessment. Display on the overhead the **fourth** question on Appendix 3-A, <u>Opening Questions</u>, and say: *Now let's move to another question:*

   - *How are your students currently involved in their assessments?*

   Again, have participants first share their responses at their tables, then have volunteers share with the whole group. Probe and support the responses as appropriate.

7. Conclude Phase 1, saying: *This Demonstration Activity is meant to build on what you currently are doing to have students assess themselves. Keep in mind that this demonstration activity addresses only self-assessments of very specific classroom or workplace practices.*

PHASE 2: Constructing Meaning (2 hours, 15 minutes)

1. Divide the participants into small groups by teaching area.

2. After the groups are formed, distinguish types of self-assessment. Say: *The professional literature on self-assessment distinguishes at least two types of assessments: those that focus on how students **act** (for example, how they participate in groups or how they go about completing a project) and those that focus on what students **produce** (for example, what they have written as lab reports or what they have constructed in the workplace).*

Self-Assessment of How Students Act

1. Examine instruments for assessing how students act. Say: *The handout entitled Classroom and Workplace Action Assessments (Appendix 3-D) presents instruments for students to use when examining how they act in a classroom or at a workplace. Students can complete these instruments at different times—weekly, monthly, or when a project is completed.*

> Distribute the instruments (Appendix 3-D, Classroom and Workplace Action Assessments) and display Appendix 3-E (Directions for Classroom and Workplace Action Assessments).

> Say, *Examine the instruments, then join your group members and review the positive features of each instrument, predict problems that might emerge when using them, generate possible solutions to the problems, and decide how these instruments might be used in your subject.*

2. After about 15 minutes, call the workshop together, debrief volunteers about their responses to the instruments, and reflect on their responses.

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Self-Assessment of What Students Produce

1. Have participants list specific student's products suitable for self-assessment. Say: *In contrast to students assessing how they act in classroom or workplace settings, students also assess what they produce in these settings. On chart paper, list specific things that students produce in your class or the workplace that permit self-assessment. For instance, you might include specific examples of:*

   - *Written assignments*
   - *Pictorial effects such as posters and scale models*
   - *Homework*
   - *Outcomes of collaborative projects*
   - *Portfolios*
   - *Practical work related to your specialization*

2. After about 10 minutes, have participants post their lists of specific self-assessment possibilities on a wall. Then have everyone conduct a gallery walk to see what has been generated.

3. After the gallery walk, have participants construct a rubric. Display the Handwriting Rubric transparency (Appendix 3-B) again and say: *Just as you used this rubric, which we provided, to assess your own handwriting, you might provide a rubric you have created when you first have students assess their own work.*

   In Module 1, Demonstration Activity 5, entitled Designing Rubrics for Classroom-Based Assessment, you used rubrics for assessing cookies and a students' essay on "Days of Spring, Days of Ecology," then you created one for your own subject matter. Based on what you already know, on what Module 1 presented, and on the handwriting rubric shown here, generate a new rubric that has at least three criteria for assessing one of the

student products listed on the charts. Be sure to write the name of the specific product on the rubric so we know what it addresses.

4. After about 15 minutes, have each group post their rubric on the wall underneath their list of possible products. Then have participants conduct another gallery walk to see the rubrics that have been generated.

5. After the gallery walk, have participants add additional elements to self-assessment practices with rubrics. Say: *Just as you used a rubric to assess your handwriting, students can use teacher-prepared rubrics such as these to assess what they produce.*

However, giving a rubric to students is only a beginning step toward student self-assessment. The article entitled <u>Student Self-Assessment: Making Standards Come Alive</u> describes four elements that extend student self assessments and make them more powerful.

Distribute the article (Appendix 3-F, <u>Student Self-Assessment: Making Standards Come Alive</u>) and display Appendix 3-G (<u>Directions for Responding to Student Self-Assessment: Making Standards Come Alive</u>).

Say, *Read the article, noting the four elements of student self-assessment (clear targets, opportunities to define quality work, feedback, and opportunities for self-correcting). Then, with your group, review the positive features of each element, predict problems that might emerge when implementing the elements, and generate possible solutions to the problems.*

6. After about 40 minutes, call the workshop together, debrief volunteers about their responses to the article, and reflect on the responses.

SECONDARY EDUCATION ACTIVITY

PHASE 3: Applying and Evaluating (50 minutes)

Guided practice

1. Guide participants' practice with self-assessment by having them determine how the article's four elements of student self-assessment could fit the rubric they constructed earlier. Distribute the reading guide for the article "Planning for Student Self-Assessment: Making Standards Come Alive" (Appendix 3-H) and have each group retrieve their rubric.

2. Then have participants collaboratively complete the guide, informing them that the guides can serve as concrete products to take away from this workshop.

3. Provide about 15 minutes for the participants to prepare their responses to the guide. Then have groups' spokespersons present their responses to the workshop.

Reviewing the Activity

1. Display Appendix 3-I (Closing Questions) and say, *To conclude this demonstration activity, imagine that those of us not at your table are visitors. We are very interested in student self-assessment, but we know very little about it. So we have asked you the following questions:*

   - *How do you see student self-assessment contributing to active learning?*

   - *How does self-assessment of actions compare with self-assessment of products?*

   - *What advice would you give someone who might begin emphasizing self-assessment next year?*

2. Have participants share their responses to these questions with the workshop.

VI. DEMONSTRATION ACTIVITY 4

Development of a Learning Log

4 hours

Overview:

SUMMARY OF THE ACTIVITY FOR LEARNING LOG
Phase 1. Activating Background Knowledge (45 minutes) • Teacher asks the participants if they or their students are using learning logs during the teaching process and to describe these experiences. • Teacher shows the participants the content of the learning log for practical training that is in use in the secondary vocational schools (Appendix 4-A). • Teacher assigns them with task in pairs to discuss the content of the learning log and to determine what they believe are the three most important questions to answer in the learning log. • Teacher then emphasizes the importance of including critical thinking questions in learning log frames and shows the Continuum of Questions (Appendix 4B). • Participants are asked to add three additional questions to the frame that elicit students' critical thinking. • Teacher asks one individual from each pair to present the three additional questions and writes them on chart paper.
Phase 2. Constructing Meaning (1.5 hours) • Teacher explains the meaning and organization of the teaching log (Appendix 4-C) emphasizing how logs can be used to promote critical thinking and school-to-work linkages. • Teacher asks participants to form groups of four (not according to subject area). • Groups are asked to create a general learning log frame that could be used by all teachers from their schools. • Teacher then shares the model from Appendix 4-D and invites discussion about similarities and differences between participants' frames and the model. • Participants then create their final questions for their frame. They are told they may use some that are in Appendix 4-D if they wish. • Participants are given the option of completing one of three tasks: creating an origami figure, a wire figure, or a tissue paper flower. Appendix 4-E • Afterward, the teacher asks participants to use the learning log frame their group created and fill it out based on the task they completed. • Discuss the usefulness of the frame for these tasks. • Teacher asks participants to create and fill in another frame based on their experiences in all four workshops given in this component of the SEA project. • Participants write their frames and responses on chart paper, attach them to the wall, and have a Gallery Walk to observe all the learning logs of their peers.

SECONDARY EDUCATION ACTIVITY

Phase 3. Evaluating and Applying (1 hour and 45 minutes)

- Teacher asks participants to review the process of creating and using learning logs.
- Teacher forms subject-specific groups and has participants design a learning log frame that the students can use in learning new information and doing practical work in their content area.
- Before they start to work in groups, the teacher reminds participants of the learning log article (Appendix 4-C) and the learning log frame in Appendix 4-D that can be used to assist participants in the development of their subject-specific learning log frames.
- Teacher asks each group to write down on a flipchart the frame of the learning log about their subject and to present it in front of the participants.
- Teacher asks participants to compare and contrast the subject-specific frame with the general learning log created earlier and explain any changes.
- Teacher encourages participants to think about how they can create different kinds of learning log frames to establish how well their students learned the material or completed tasks, as well as what students will need to concentrate on to improve their future learning and what insights they have had to the subject matter and their own performance.
- Teacher offers feedback to the subject-area groups on their logs and questions participants to determine their understanding of the learning log strategy.
- Teacher concludes by asking the participants to reflect on the learning log process and to brainstorm ideas about how their students can develop the habit of keeping a learning log.

Objectives:

As a result of this Activity, the participants will be able to:

- Understand the meaning of the learning log,

- Create a learning log model, and

- Read and understand the content of the learning log.

Write down the main contents of the performance according to the working experience. As a result of this Activity, participants will gain experience with and will reflect on the following themes from the module:

- ✓ Collaboration
- ✓ Communication
- ✓ Problem solving/Decision making
- ✓ Self-assessment

✓ Critical thinking

✓ Research

✓ Leadership

PHASE 1: Activating Background Knowledge (45 minutes)

Start the activity by asking the participants if they are familiar with a learning log. Ask them if they and/or their students have ever used a learning log or a log of any type and for what purpose (e.g., school learning, field work, on-the-job). Take a few minutes to discuss the participants' experiences with and/or knowledge of learning logs.

Afterward, show the participants the content of a typical learning log from Appendix 4-A. (which is being used in the practical training in the secondary vocational schools). Ask participants to work with a partner and look over the features of the learning log. Then have them identify what they consider to be the three most important questions students have to answer in the learning log and why. Participants should take about 7-10 minutes in discussing the contents of the learning log and answer the questions that were posed.

Next, the teacher should ask the group: *If we want our students to become critical thinkers, what are some other questions we should include in this log? What is missing?* Spend some time discussing the nature of questions that encourage critical thinking and how they differ from those that only require literal thinking about practical work. After discussion, show a transparency Appendix 4-B: Continuum of Critical Thinking.

Each pair should now create three additional questions that they believe should be included in learning logs that promote critical thinking about practical work. When they finish with the writing, ask one individual from each pair to present the additional questions. These should be written on a flip chart.

SECONDARY EDUCATION ACTIVITY

PHASE 2: Constructing Meaning (1.5 hours)

With overhead transparencies and handouts (Appendix 4-C) explain the purpose and the function of the learning log. It is especially important to point out that although the learning log can be used to master the content from the general educational and vocational subjects, or give a factual description of what was accomplished at the workplace, it can also help students to think more in depth about what they are learning if the questions require thoughtful responses. Learning Logs can be used to help students understand the school-to-work linkages that they must make to be successful in the workplace.

Have the pairs now form into groups of approximately four participants. Each group will create one learning log frame that might be used by all teachers at their schools for practical work students do. It should not be subject specific. When the groups have developed their frames, then share the model frame in Appendix 4-D. Have groups discuss how their frames are similar to and different from the model.

Then say: *I would now like you to decide on the final questions for your frame. You may use some that are in the Appendix if you wish. You will have five minutes to finalize your frame.*

Once the groups are finished say, *You will now each have a choice of completing one of three activities we have prepared for you to do. (Appendix 4-E) Your choices are:*

> *1. Creating an origami figure,*
>
> *2. Creating a wire figure, or*
>
> *3. Creating a tissue paper flower.*

You will work on this activity individually. We will give you the materials needed to complete this along with printed directions. After you have created your chosen object, you should individually complete your Learning Log frame your group just developed, commenting on your experience with performing this task. You will have 20 minutes to complete the task and 10 minutes to complete the frame.

Distribute materials and make sure everyone works individually.

After 30 minutes, ask participants how they did. *Was the frame useful? Were there responses they had to the task that were not covered by their questions?* Also ask them, *what revisions would you now make to your frame? Discuss these with your group and make one more set of edits. You will have 10 minutes to complete this.*

Then say: You will now have 20 minutes to complete one more frame. This time we would like to complete a frame about your experiences in the workshops we have provided you in Ohrid since last May. Answer the questions on the frame, considering all four workshops.

When individuals have completed their frames, they should compile responses onto one piece of chart paper that will provide display for a Gallery Walk.

PHASE 3: Evaluating and Applying (1 hour and 20 minutes)

Reviewing the Learning Log Strategy (20 minutes)

The teacher should take participants through a review and analysis of the previous activities. Have participants recall the experiences of discussing and creating learning logs in this demonstration activity. Remind the participants to look closely again at the learning log frame they were given for this activity and the logs they created. Ask questions like:

- *What is the purpose of maintaining a learning log?*
- *What steps are involved in creating learning log frames?*
- *How can learning logs help promote critical thinking?*
- *How can students be encouraged to use learning logs?*
- *How can you use the learning log to assess students?*
- *Can students use a learning log in every subject?*
- *What are the advantages and disadvantages of using a learning log?*

SECONDARY EDUCATION ACTIVITY

Guided Practice (45 minutes)

As a concluding activity, have participants apply the learning log strategy by dividing them into groups according to the subjects they teach. Give them the task of creating a learning log frame for the students from their subject area that can be used to master new content while also developing critical thinking. Before they start to work, remind them of the learning log article (Appendix 4-C) and remind them of the learning log frame in Appendix 4-D. Specify that the content depends on the type of the task and the objective that needs to be achieved. They should create these learning log frames based on the examples provided them, as well as the positive features from their own and observed in the learning log frames of their peers. These new subject-specific frames should be written on flipchart paper.

Ask a member from each group to share the learning log frame with all participants. The spokesperson should talk about how it compares with the general one created earlier, and if changes were made to explain the reasons why. Make sure spokespersons point out the content of the *leaning log* that is the most appropriate for the given subject area. Ask the participants: *Why is the content of the learning log important? Does your content of the learning log contain all important elements? How helpful can this learning log be for you when completing similar tasks in the future? How can learning logs be used at the end of the class in order to establish how well the students learned the material and on what they need to concentrate in the future?*

Evaluation (15 minutes)

At the end of the session, the teacher provides an overview of the process and applications of the learning log strategy. In addition, the teacher should provide each subject area group an analysis about how well the group members learned the strategy. The teacher

should ask brief questions in order to discover whether the participants have understood the importance of the learning log for helping students document their learning and accomplishments. Finally, encourage them to think about what they have learned about themselves and how creating and maintaining learning logs will help them think more critically in the future about their work.

Secondary Education Activity

VII. APPENDICES

Appendix 1-A

Reading Visual Aids in Texts

Types of Graphics

1. **TABLES** are organized displays of factual information, usually numbers or statistics. They are used to make comparisons between or among data.

2. **GRAPHS** plot a set of points on a set of axes to show relationships.

3. **MAPS** describe relationships and provide information about location and direction.

4. **DIAGRAMS** explain processes to show relationships between parts and show what follows what.

5. **TIMELINES** show how something has progressed in stages or show how something has evolved over time.

1. Example of a Table

Table showing roundtrip flight between Skopje to Washington, DC (Source: www.united.com).

Leg	Flight info	Date	Depart	Arrive	Stops
1	Cirrus Airlines 1130	Dec 28	6:40 am SKP	9:35 am FRA	Non-stop
	United Airlines 8827 (Operated by Deutsche Lufthansa Ag)	Dec 28	1:15 pm FRA	3:55 pm IAD	Non-stop
2	United Airlines 932	Jan 4	9:45 pm IAD	11:35 am (Next day) FRA	Non-stop
	Cirrus Airlines 1131	Jan 5	2:30 pm FRA	4:45 pm SKP	Non-stop

Key:
 SKP: Code for Skopje airport
 FRA: Code for Frankfurt airport
 IAD: Code for Washington, Dulles airport

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2. Examples of graphs

2.1 LINEAR GRAPHS: points are plotted along a vertical and a horizontal axis and then connected to form a line. Often used in mathematics or statistics.
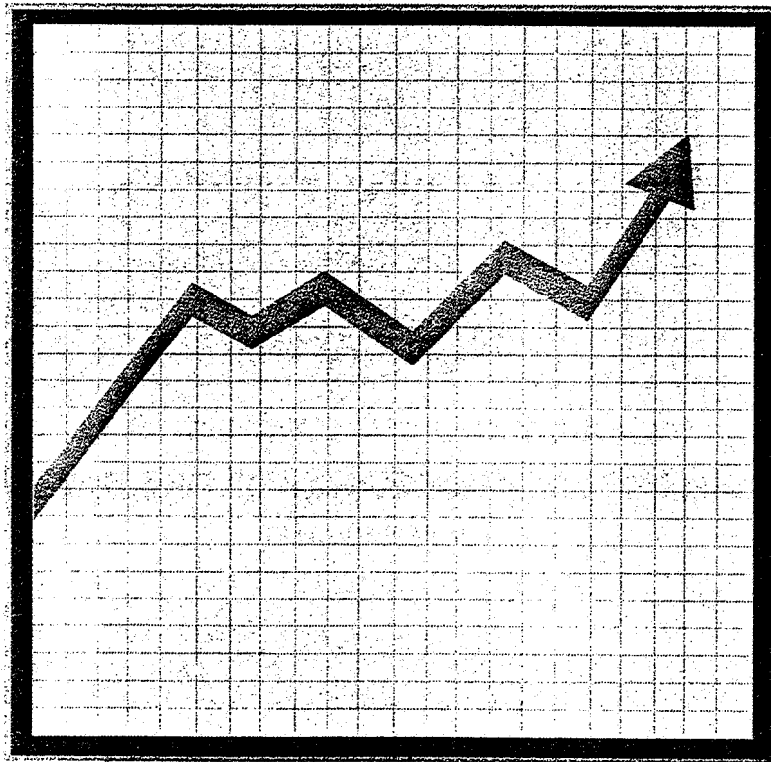
2.2 CIRCLE GRAPHS: are used to show the relationships of parts to the whole. Sometimes they are called pie charts.
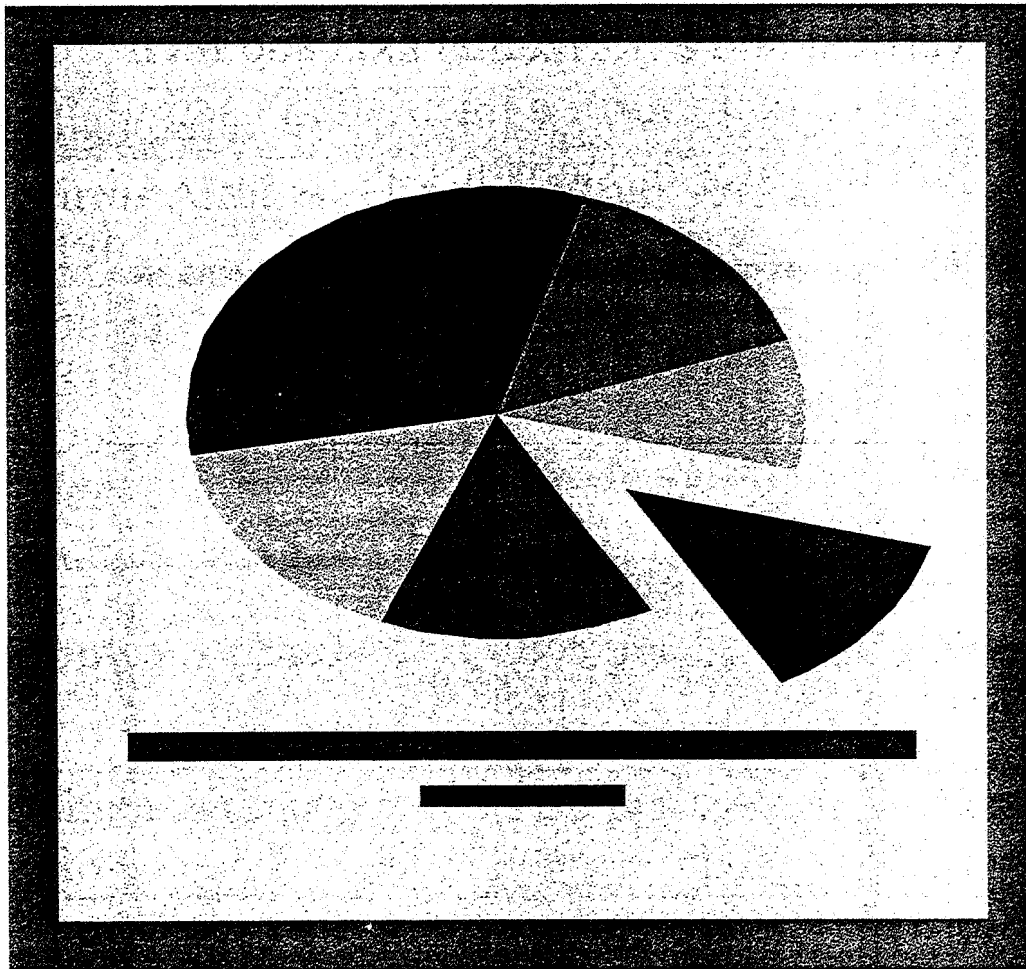
Question: What could the various parts of the pie represent?

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2.3. BAR GRAPHS: make comparisons between quantities or amounts to emphasize differences, particularly over time.
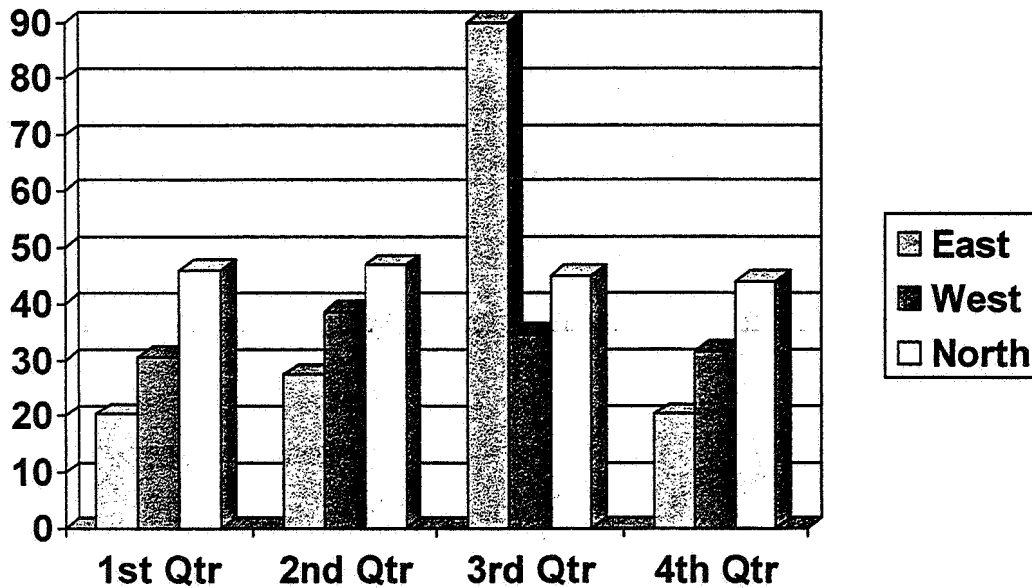
Sample bar graph showing earnings of companies in the East, West, and North of a country.

3. **MAPS**: describe relationships and provide information about locations.

Students can learn to:

- Read the caption to identify the subject.
- Use the legend or key.
- Note distance scales.
- Study the map for trends or key points.
- Create a mental picture of the map.
- Write a statement about what the map shows.

© 2004 MapQuest.com, Inc.; © 2004 AND Products B.V.

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4. DIAGRAMS

- Help explain complicated processes, structures, or sequences described in the text.

- In this example, a drawing has been used to help the reader understand the structure of the ear. Each part is clearly labelled.

- Students can learn to read and make diagrams.

Stapes
Incus
Malleus

Tympanum ("eardrum")
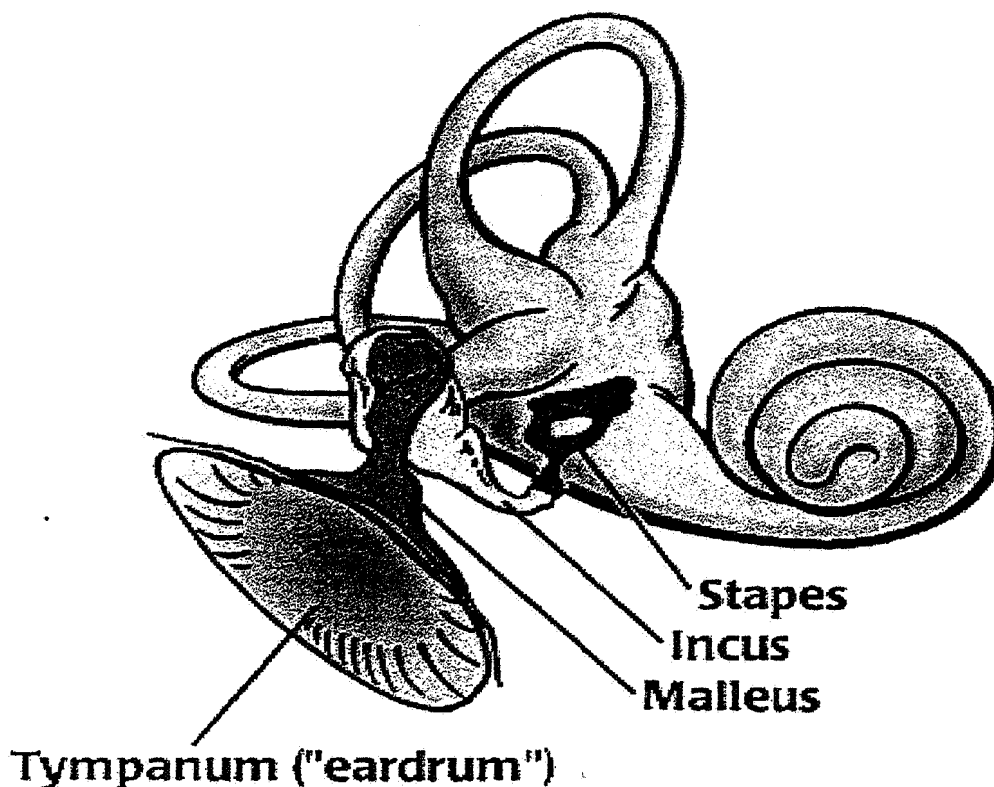
5. TIMELINES

Show something has progressed in stages or show something has evolved over time.

- Often appear in scientific or historical writing

- Used to show progressive events chronological order
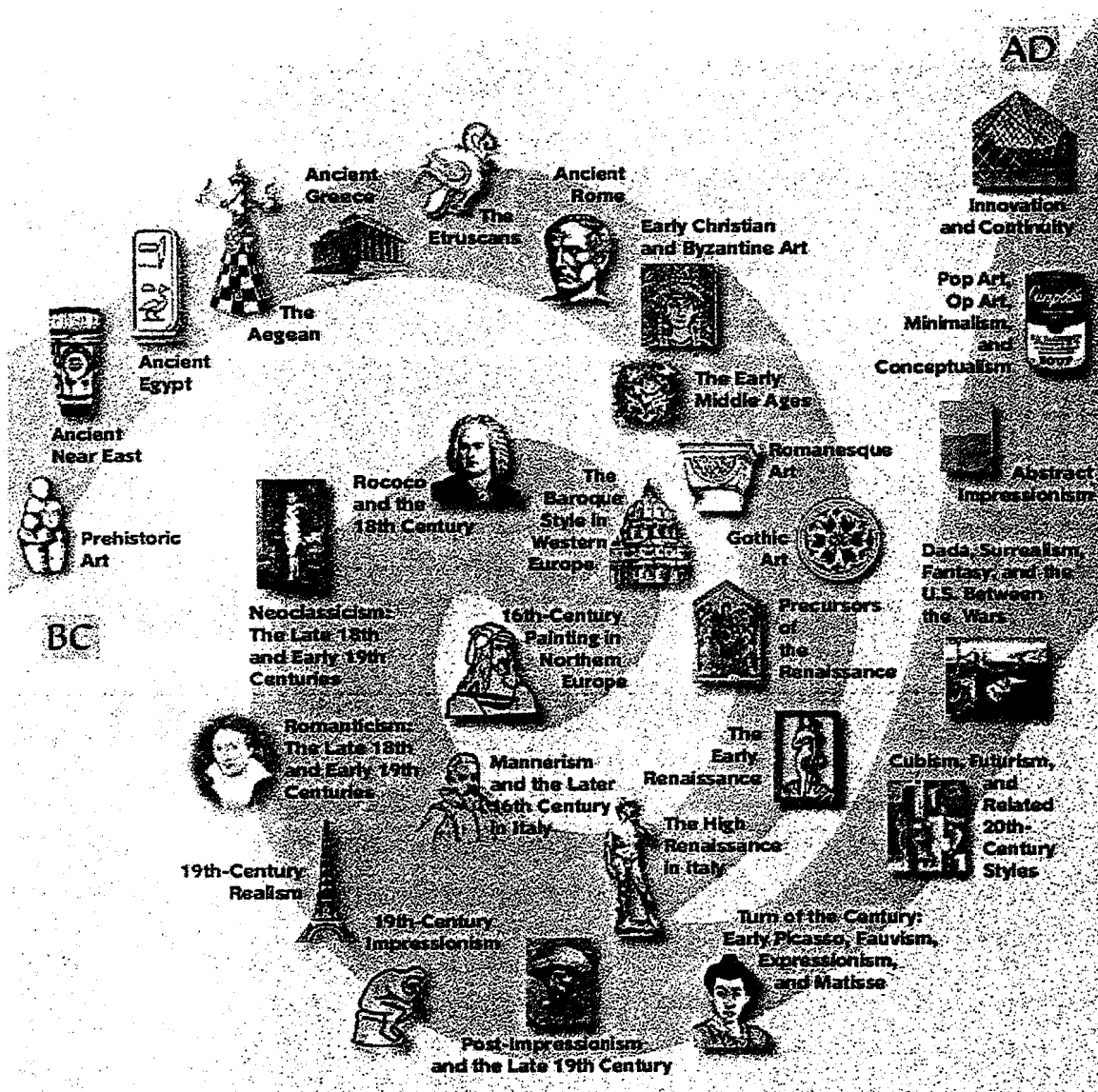
Timeline related to art history.

Lewis J. (2003). Academic Literacy. Boston – New York. Houghton Mifflin Company
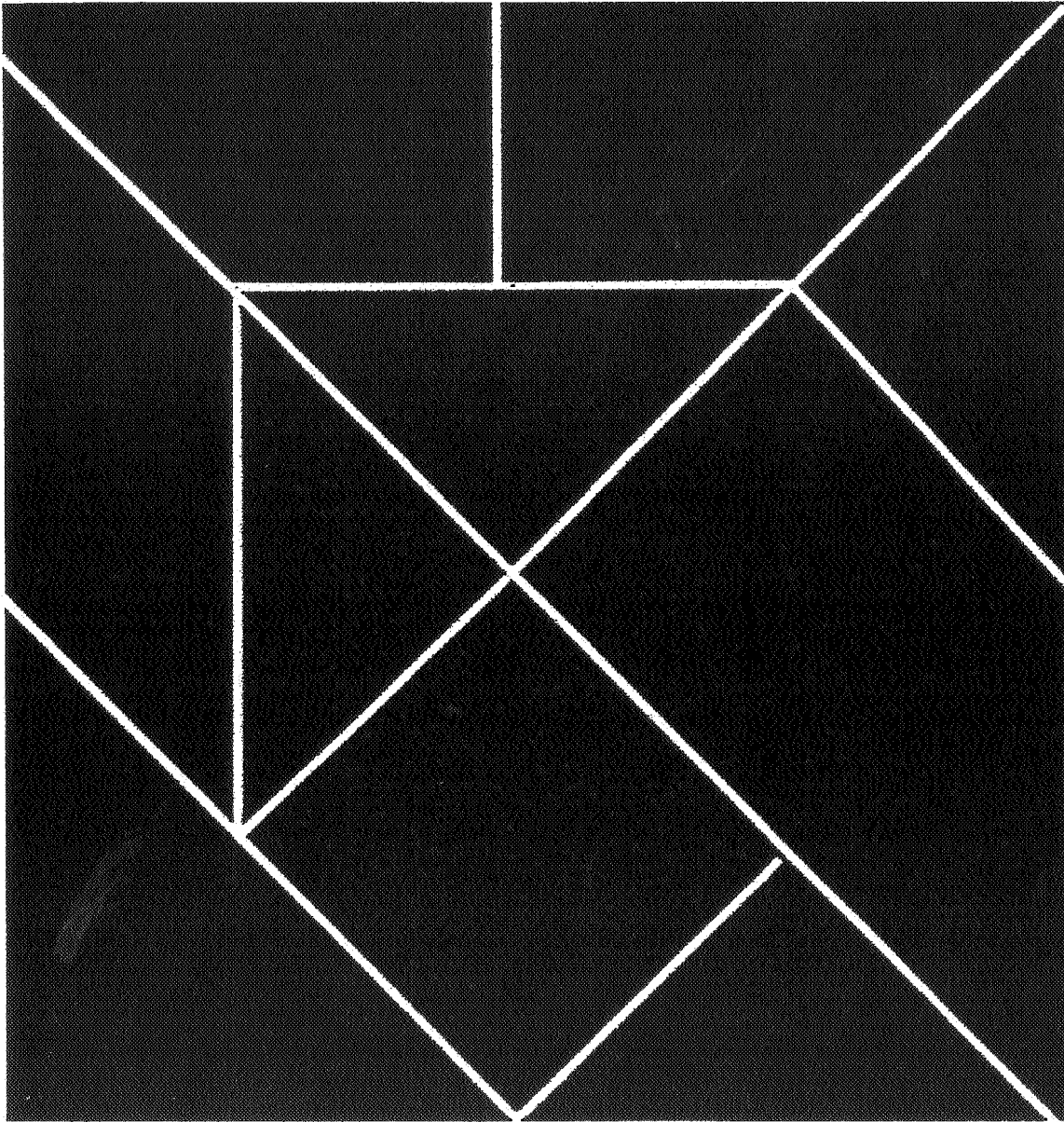
Appendix 1-B

Directions for Working Groups

Demonstration Activity 1, Phase 2, #2

Group 1: Compose a tangram from the parts you have been given by using the drawing on the next page. Record how long this takes.

Group 2: Compose a tangram from the parts you have given *without looking at the drawing.* Record how long this takes.

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[Tangram Diagram: - Retrieved 17.04.2004 from http:/skmath.com/category.asp]

Appendix 2-A

What is role playing?

- Role playing is a method for exploring the issues involved in a complex social situation. (Role playing in education).

- A role-playing simulation is a collaborative learning activity in which students are given a scenario, assume roles, and interact with each other in character (About role playing simulations).

- Role playing provides social interaction as well as real life experiences, both of which are necessary if students are to construct meaning from their learning (Teaching Engineering to K-12 Student Using Role Playing Games).

SECONDARY EDUCATION ACTIVITY

Appendix 2-B

What are the benefits of the role playing for students?

- Role playing can help student to become more interested and involved, not only learning about the material, but learning also to integrate the knowledge in action, by addressing problems, exploring alternatives, and seeking novel and creative solutions (Role playing in education).

- Role playing is the best way to develop the skills of initiative, communication, problem solving, self-awareness, and working cooperatively in teams, and these will help to young people be prepared for dealing with challenge in their work life (Role playing in education).

Appendix 2-C

Background:

When you are selling your products, you need to do more than wait for the customer to tell you he or she wants to buy something. First, you will need to make the customer comfortable with your business, which is no easy task. Potential customers will want you to do a lot. They will want you to make change so they can buy a soda in the machine across the street. They will want you to listen to their problems. They will stop by your business without really knowing what they want to buy. If you respond to their needs, potential customers will become comfortable with you and will sometimes buy your products.

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Appendix 2-D

Salesperson:

You have started a pizza business. Because business is booming, you have hired a few people to work at the store when you are not available. You have just arrived at the restaurant and have been approached by one of your regular customers.

Appendix 2-E

Customer:

"I was here yesterday to buy a slice of pizza. After I ordered, the sales clerk went into the kitchen and never come back. I waited for 10 minutes and finally left. I have been coming here every day for a while and I've never experienced anything like this!"

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Appendix 2-F

Observer:

During the role play, use the questions below to guide your observation. When they have finished, tell them both what you think they did tell and encourage them to continue practicing.

- Did the salesperson maintain eye contact?

Yes   Not sure   Needs practice

Comments:

- Did the salesperson ask questions to identify the customer's problem?

Yes   Not sure   Needs practice

Comments:

- What were the questions the salesperson asked to identify the customer's problem?

Comments:

Appendix 2-G

Role Playing Procedure

1. Define objectives

2. Choose context and role

3. Introducing the exercises

4. Student preparation/research

5. The role play

6. Concluding discussion

7. Assessment (How to Teach Using Role Playing)

Secondary Education Activity

Appendix 2-H

How to Teach Using Role Playing

Role-playing exercises can be hard work for the instructor, both in preparation and in execution, but the work tends to pay off in terms of student motivation and accomplishment. As with any big project, it's best to take it one step at a time:

1. Define Objectives
2. Choose Context and Roles
3. Introducing the Exercise
4. Student Preparation/Research
5. Role Play
6. Concluding Discussion
7. Assessment

Fortunately, much of the work of preparation, once done, can be distributed to other educators. Many well-developed role-playing exercises are available on the scenario pages, organized by topic or by type.

1. Define Objectives

The details of what you need to do depend entirely on why you want to include role-playing exercises in your course.

- What topics do you want the exercise to cover?
- How much time do you and your class have to work on it?
- What do you expect of your students: research, reports, or presentations?
- Do you want the students role playing separately or together?
- Do you want to include a challenge or conflict element?

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2. Choose Context and Roles

In order to prepare for the exercise:

- Decide on a problem related to the chosen topic(s) of study and a setting for the characters. It is a good idea to make the setting realistic, but not necessarily real. Consider choosing and adapting material that other instructors have prepared.

  For problems and settings with lots of detail, have a look at examples in the Starting Point Case Study Module. The module itself contains more information about using cases to teach.

- If the characters(s) used in the exercise are people, define his or her goals and what happens if the character does not achieve them.

- You should work out each characters' background information on the problem or, better yet, directions on how to collect it through research. If possible, prepare maps and data for your students to interpret as part of their background information rather than the conclusions on which they would ordinarily base their decisions (especially if the characters are scientists).

3. Introducing the Exercise

Engage the students in the scenario by describing the setting and the problem.

- Provide them with the information you have already prepared about their character(s): the goals and background information. It needs to be clear to the student how committed a character is to his/her goals and why.

- Determine how many of your students have done role playing before and explain how it will work for this exercise.

- Outline your expectations of them as you would for any assignment and stress what you expect them to learn in this lesson.

- If there is an inquiry element, suggest a general strategy for research/problem solving.

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4. Student Preparation/Research

Even if there is no advance research assigned, students will need a few moments to look over their characters and get into their roles for the exercise. There may also be additional questions:

- Why they are doing this in character? Why did you decide to make this a role playing exercise?

- Students may have reservations about the character that they have been assigned or about their motives. It is good for the instructor to find out about these before the actual role play. It can be very difficult for a student to begin researching an issue from a perspective very different from their own because even apparently objective data tends to be reinterpreted as support for pre-existing world-views.

  - With regards to environmental issues, many environmental groups have well-written, carefully researched, and nicely-engineered websites that will provide arguments as well as information for a student assigned a character to whom protecting the environment is very important.

    - The Sierra Club Homepage (more info)
    - Worldwatch Institute Homepage (more info)
    - Natural Resources Defense Council Homepage

    Similar websites representing the common viewpoint of the worker, property owner, or industrialist whose future may be in conflict with environmental interests are hard to find. One site, Debate Central, has constructed arguments for characters promoting property rights and wary of government intervention. Their topic coverage is still limited, however. A

poorer alternative is to send students to the websites of companies involved in an issue to read their public relations material.

➤ Often, the best resource for understanding people is other people. Model UN encourages participants to call the embassy of the country they are to represent for advice. The same can be done with the public relations divisions of mining firms and unions, environmental, and taxpayer protection groups, etc.

- If there is an inquiry component (i.e. student-led research), the students may need help coming up with a research plan and finding resources.

5. The Role Play

Depending on the assignment, students could be writing papers or participating in a Model-UN-style summit. For a presentation or interaction, props can liven up the event, but are not worth a lot of effort as they are usually not important to the educational goals of the project.

Potential Challenges with Interactive Exercises

6. Concluding Discussion

Like any inquiry-based exercise, role playing needs to be followed by a debriefing for the students to define what they have learned and to reinforce it. This can be handled in reflective essays, or a concluding paragraph at the end of an individual written assignment, or in a class discussion. The instructor can take this opportunity to ask the students if they learned the lessons defined before the role play began.

Secondary Education Activity

7. Assessment

Generally, grades are given for written projects associated with the role play, but presentations and even involvement in interactive exercises can be graded. Special considerations for grading in role playing exercises include:

- Playing in-character
  - ➢ Working to further the character's goals
  - ➢ Making statements that reflect the character's perspective
- In an interactive exercise, being constructive and courteous
- For many assignments, being able to step back and look at the character's situation and statements from the student's own perspective or from another character's perspective.

Retrieved November 21, 2004, from How to Teach Using Role Playing
http://serc.carleton.edu/introgeo/roleplaying/howto.html.

Appendix 2-I

Examples of role-playing simulations

1. **Political Science:** International Political Economy

   Students work in groups to play the role of countries and international organizations. Groups negotiate international agreements and treaties. In order to successfully carry out this simulation of world politics, teacher wants to provide student with a way to share information, and to engage in strategizing, negotiating, and lobbying outside of class time.

2. **Ecology:** Rainforest of Madagascar

   Students solve global environmental problems by modelling roles of individuals involved in the exploitation, destruction, and protection of the threatened rainforests of the island of Madagascar. At the end of this activity, students will be able to:

   - describe the reasons for deforestation.
   - describe the biological and biotic components of a typical rainforest.
   - identify the location of Madagascar and better understand the culture of the Malagasy.
   - identify the various aspects to be addressed (i.e. ecological, political, economic) in resolving the problem of deforestation.
   - compare and contrast the needs of each participant at the round-table discussion.
   - predict outcomes of reduction of biological diversity.

3. **Law:** Values and Lowering Skills

   Students play two roles. First, they assume the role of partners in a small law firm looking for a pro bono project. Second, students work in groups to play the roles of

SECONDARY EDUCATION ACTIVITY

various client groups that present their cases to the law firm. The class votes on which

client to represent after hearing all the cases.

Retrieved November 21, 2004, from About role playing simulations

http://catalyst.washington.edu/method/rps.html.

Appendix 2-J

Analyzing and Reflecting on the Role Playing Simulation

- *What is the primary purpose of role playing exercises?*

- *Why use role playing exercises?*

- *What you think about integration theory and practice through role playing method?*

- *When do you think it would be most appropriate to use role playing?*

- *What are the benefits of the role playing for students?*

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Appendix 3-A

Opening Questions

Why is assessment an important part of the teaching process?

Why is assessment an important part of the learning process?

Why is self-assessment an important part of the learning process?

How are your students currently involved in their assessments?

Appendix 3-B

Handwriting Rubric

Letter Spaces

letters are spaced apart from each other evenly	5	4	3	2	1	0	letters are not spaced apart from each other evenly

Letter Sizes

letter lengths and widths consistently are proportionate	5	4	3	2	1	0	letter lengths and widths consistently are not proportionate

Letter Shapes

letter shapes are horizontal, vertical, slanted, or curved appropriately	5	4	3	2	1	0	letter shapes are not horizontal, vertical, slanted, or curved appropriately

Baseline Arrangement

letters rest on a horizontal baseline consistently	5	4	3	2	1	0	letters do not rest on a horizontal baseline consistently

Letter Formation

letters are produced accurately	5	4	3	2	1	0	letters are not produced accurately

Secondary Education Activity

Appendix 3-C

Overview of Self-Assessment

What is student self-assessment?

- Self-assessment includes reflective activities in which students are prompted to consider the strengths and weaknesses of their work, make plans for improvement, or integrate the assignment with previous learning (Bruce, 2001).

- Self-assessment offers students the opportunity to manage their own learning by helping them to identify appropriate standards to apply to their work, and to make the judgments about the extent to which they meet these standards or criteria (Black & William, 1998).

- Self-assessment helps students learn to be reflective thinkers as well as to understand and achieve high standards (Education Development Center, n.d.).

Why is student self-assessment important?

- By evaluating their own work, students now accept responsibility for not only completing the work but share the responsibility of assessing it.

- Understand how they are learning and relate their learning to a wider context.

- Help to become more effective, independent and confident self-directed learners.

- Improve student general skills for study and career management.

- Articulate student personal goals and evaluate progress towards their achievement.

- Encourage a positive attitude to learning throughout life (Hinett, 2004).

What are the benefits of teaching self-assessment skills?

- Transfers some responsibility for making decisions from the teacher to the learner.

- Helps students gain understanding of the concepts of quality.

- Provides of foundation for lifelong learning.

- Improve learning subject being studied (Black & William, 1998).

What are major principles of self-assessment instruction?

- Involvement of students in assessment needs careful planning.

- Assessment procedure should always involve well-defined, publicity available assessment criteria.

- The quality of feedback on student work must be maintained.

- Self-assessment procedure should be subject to particularly careful monitoring and evaluation from the teacher and students' point of view (Kay 2001).

Appendix 3-D

Classroom and Workplace Action Assessments

Questions for Individual Actions

(from Hart, 1999)

1. What goals did you set for yourself in this work and how well did you achieve them?

2. What would you do differently if you could do this work again?

3. What did you learn about yourself while completing this work?

4. What did you find most difficult when completing this work?

5. What advice would you give someone who might begin this work next year?

Questions for Individual Actions

(from Washington Center Evaluation Committee, n.d.)

1. What did you do?

2. What was the most important thing you did?

3. What was the least important thing you did?

4. Which activities were most important to you? Why?

5. Which activities were least important to you? Why?

6. Think of some noteworthy moments:

   - What were your best moments?

   - What were your worst moments?

   - What were your most typical moments?

   - What were your turning points?

7. How could you have done a better job?

8. How could you have done a worse job?

Sentence Frames for Individual Actions
(from Manitoba, Canada, Education and Training, 1998)

Think about the work you completed and finish the following sentence frames:

1. I am proud of ...

2. I would like to learn more about ...

3. I wish I had ...

4. I was most interested in ...

5. My biggest challenge was ...

Questions for Group Actions
(from Bird, Goodman, & Goodman, 1996)

1. What has been your contribution to the project so far?

2. Who has done the most work in your group so far?

3. Are there any problems that your group needs to work on?

4. Does your group use its time wisely? Explain.

5. Based on your view of everyone's work so far, what grade would you assign your group? Why?

6. What grade would you assign yourself? Why?

Secondary Education Activity

Rubric for Group Actions

Productivity

We stayed on task and accomplished much.	4	3	2	1	We often got off task, accomplishing little.

Participation

Everyone acted like an insider, contributing ideas.	4	3	2	1	Some acted like outsiders, contributing little.

Communication

We listened attentively and responded to ideas in a give-and-take conversation.	4	3	2	1	We often ignored others' ideas and had a one-sided conversation.

Climate

We disagreed agreeably; the atmosphere was friendly and relaxed.	4	3	2	1	We often disagreed disagreeably; the atmosphere was tense and quarrelsome.

Roles

Each member followed preferred (or assigned) roles to help the group move along.	4	3	2	1	Only a few followed preferred (or assigned) roles to help the group move along.

Appendix 3-E

Directions for Classroom and Workplace Action Assessments

Examine the instruments, then join your group members and:

(a) review the positive features of each instrument,

(b) predict problems that might emerge when using them,

(c) generate possible solutions to the problems, and

(d) decide how these instruments might be used in your subject.

Appendix 3-F

Student Self-Assessment
Making Standards Come Alive

by Linda B. Bruce

Incorporating a standards-based approach to teaching and learning can be a creative and enriching endeavor. What's one key approach? Ask students to assess their own work.

Five teachers in a suburban high school recently implemented student self-assessment (SSA) activities in their classes. The results of this experiment—in courses as different as physics and foreign language—revealed the potential of SSA to make standards come alive for students. The reactions of students and teachers in this project also indicated that student self-assessment practices offer solutions to some of the concerns about standards that have been expressed by both supporters and opponents of this approach to school reform.

Student Self-Assessment in Practice

In general, SSA refers to training students to evaluate their own work for the purpose of improving it (Rolheiser & Ross, 2000). To become capable evaluators of their work, students must have:

- clear targets,

- opportunities to define quality work,

- feedback, and

- opportunities for self correcting.

SSA also includes reflective activities in which students are prompted to consider the strengths and weaknesses of their work, make plans for improvement, or integrate the assignment with previous learning (Paris & Ayres, 1994; Stiggins, 1997; Wiggins, 1998).

Clear Targets

The standards-based education movement has grown out of the recognition that clear goals for learning are required to ensure quality education for all students (Marzano, Pickering, & McTighe, 1993). Neither teachers nor students can succeed without a clear vision of what students must know and be able to do, or without the ability to translate that vision into actions that result in high quality work (Stiggins, 1997). The district in which our experiment took place has well-defined academic standards. In planning their self-assessment activities, the teachers made sure they had a clear target in mind for students by selecting a standard or a learning goal as a focus for the activity.

Opportunities to Define Quality Work

To meet standards, students must understand the meaning of standards and be able to translate them into guidelines they can use. The process of leading students to express a standard in their own words in terms of observable criteria can produce goals for student work that are specific, understandable, and appropriately challenging (Rolheiser & Ross, 2000). When interviewed after the experiment with SSA, students clearly indicated that they liked being involved in designing the criteria. "Well, now I know what I need to work on," one student remarked.

Teachers can also invite students to contribute to the choice of assessment tasks, the rubric that describes levels of proficiency, or the scoring procedure. Allowing students to work cooperatively with teachers in these areas appears to help students internalize the standard and feel more ownership of the assessment (Cole, Coffey, & Goldman, 1999; Ross, Rolheiser, & Hogaboam-Gray, 2000; Stiggins, 1997). Most students in our classes participated freely in the discussion to define the criteria.

Secondary Education Activity

Negotiation is a necessary part of the process of co-designing criteria. Rolheiser and Ross, major contributors to the study of student self-assessment, describe this negotiation as "neither imposing school goals nor acquiescing to student preferences" (2000, p. 33). Resolving differences of opinion between students turned out to be a more significant factor in our experiment. Physics students, in particular, engaged in a lively discussion before arriving at consensus for the definition of a high-quality lab report. Almost all of the students interviewed later about that discussion thought it had been helpful. As one boy observed, "I think that by getting different ideas and different opinions on it as a class, you got a good understanding of what the standards should be." Another added, "I think all of us learned a lot from that, just because we had to work together and we all had to agree on it. And we had to piece it all together for ourselves instead of the teacher always doing it, and I think you learn a lot more by doing things yourself, than from just having the teacher do it for you."

Feedback

The next steps in SSA include asking students to apply the criteria to their work and get feedback about their success. Feedback has been defined as "describ[ing] what you did and did not do in terms of your goal" (Wiggins, 1997, p. 8). Feedback that is informational and useful in nature has been considered to be both critical to learning and highly motivating (Jensen, 1998; Wiggins, 1997).

Effective feedback can come from many sources, not just from comments spoken or written by the teacher. Two teachers in our experiment enlisted students to evaluate the work of their peers. Although some students expressed discomfort with that task, most indicated that having a previously defined list of criteria made the process easy and fair. All but one of the students interviewed described ways in which peer-evaluating helped them to improve the quality of their own work. They reported recognizing their own mistakes when they saw

Secondary Education Activity

similar errors in a peer's work, for example. Students also said they benefitted from seeing another student's approach to an assignment. This activity seemed to give students one more way of interacting with standards at a meaningful level.

Opportunities for Self-Correcting

Feedback from any source, however, is futile if it does not lead to opportunities for students to self-correct. Self-correction, the fourth step in the process of SSA, is the true goal of student self-assessment (Wiggins, 1997). The constructivist concept of learning as a "work in progress" acknowledges that excellence in almost any endeavor requires the iterative processes of refinement and improvement (Darling-Hammond, Ancess, & Falk, 1995; Frederiksen & Collins, 1989; Glasser, 1998). Teachers who encourage students to learn from their mistakes show faith in students' capabilities and promote students' personal control in the learning context. This approach increases the likelihood that students will achieve competence in the subject matter (Valencia, 1990; Wlodkowski, 1999). In these ways, opportunities for self-correcting provide a necessary and effective step in students' eventual accomplishment of standards.

In analyzing our experiment, the teachers concluded that they should have promoted selfcorrection more directly than they did. Although they implemented most of the other elements of SSA, they tended to leave self-correcting up to the students to do on their own. The good news was that many students reported that they had made adjustments to their work—sometimes as a result of the feedback, but also because they had a rubric to consult. One student reported having become "more of a perfectionist," and another said that she "double-checked the rubric two or three times" because she knew "exactly how I could make my paper good."

Retrieved November 21, 2004, from *Classroom Leadership*
http://www.ascd.org/publications/class_lead/200109/bruce.html.

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Appendix 3-G

Directions for Responding to

Student Self-Assessment: Making Standards Come Alive

Note the four elements of student self-assessment:

1. Clear Targets

2. Opportunities to Define Quality Work

3. Feedback

4. Opportunities for Self Correcting

After reading, join your group members and

> (a) review the positive features of each element,

> (b) predict problems that might emerge when implementing the elements, and

> (c) generate possible solutions to the problems.

Secondary Education Activity

Appendix 3-H

Guide
Planning for Student Self-Assessment:
Making Standards Come Alive

Clear Targets: What standard, or learning goal, could be the focus of this rubric?

Opportunities to Define Quality Work: How could students have contributed to the production of this rubric?

Feedback: How could this rubric be used to provide feedback?

Opportunities for Self Correcting: How could this rubric be used for self-correcting?

Secondary Education Activity

Appendix 3-I

Closing Questions

How do you see student self-assessment contributing to active learning?

How does self-assessment of actions compare with self-assessment of products?

What advice would you give someone who might begin emphasizing self-assessment next year?

Appendix 4-A

Learning Log Content

Title of the practical task, exercise

_____

_____

Number of practical task, exercise _____

Location of performance_____

Date _____

Activities to be taken in order to complete the practical task, exercise:
(working material, tools, visit to enterprise etc.)

Content of the work (define the process of work and specific practical operations):

Working part (elaborate the process of work and specific practical operations):

Secondary Education Activity

Drawing, scheme, draft:

Notes made by the student regarding the realization of practical task, exercise:

Opinion of the teacher, i.e. the person in charge of the practical task, exercise, and conditions for realization:

Date	Mark	Signature of teacher, Person in charge

References: Kiril Risteski, d-r Ivo Dukoski, Blagoja Jovanov

Diary for practical training, Skopje, 2001

Appendix 4-B

Question Continuum

Literal	Interpretive	Applied

Narrow questions

Cognition and memory	Convergent thinking
Recall	Explain
Recognize	Infer
Define	Identify relationships
List	Cause-effect
Name	Compare-contrast
Describe	Conclude
Tell	Generalize
Cite	Summarize
Locate	
State	

Broad questions

Divergent thinking	Evaluation
Hypothesize	Recommend
Predict	Judge
Pretend	Reflect
Create	Justify
Imagine	Defend
Elaborate	Appraise
Demonstrate	Criticize
Utilize	Support

Source: Vacca, J., Vacca, R. & Gove, M. (1991) *Reading and Learning to Red*, NY: Harper Collins

Drawing, scheme, draft:

Notes made by the student regarding the realization of practical task, exercise:

Opinion of the teacher, i.e. the person in charge of the practical task, exercise, and conditions for realization:

| Date | Mark | Signature of teacher, Person in charge |

References: Kiril Risteski, d-r Ivo Dukoski, Blagoja Jovanov

Diary for practical training, Skopje, 2001

Appendix 4-B

Question Continuum

Literal	Interpretive	Applied
Narrow questions		**Broad questions**
Cognition and memory Convergent thinking	Convergent thinking	Divergent thinking Evaluation
Recall	Explain	Hypothesize Recommend
Recognize	Infer	Predict Judge
Define	Identify relationships	Pretend Reflect
List	Cause-effect	Create Justify
Name	Compare-contrast	Imagine Defend
Describe	Conclude	Elaborate Appraise
Tell	Generalize	Demonstrate Criticize
Cite	Summarize	Utilize Support
Locate		
State		

Source: Vacca, J, Vacca, R. & Gove, M. (1991) *Reading and Learning to Red*, NY: Harper Collins

Secondary Education Activity

Appendix 4-C

The Learning Log

The learning log serves many of the functions of an ongoing laboratory notebook. During most class sessions, students write for about five minutes, often summarizing the class lecture material, noting the key points of a lab session, and raising unanswered questions from a preceding class. Sometimes, students write for just one or two minutes both at the beginning and end of a class session. At the beginning, they might summarize the key points from the preceding class (so that the teacher doesn't have to remind them about the previous day's class). At the end of class students might write briefly about a question such as:

- What one idea that we talked about today most interested you and why?
- What was the clearest point we made today? What was the foggiest point?
- What do you still not understand about the concept we've been discussing?
- If you had to restate the concept in your own terms, how would you do that?

Such questions can provide continuity from class to class, but they can also give teachers a quick glimpse into how well the class materials are getting across. Some teachers pick up the complete learning logs every other week to skim through them, and others pick up a single response, particularly after introducing a key concept. These occasional snapshots of student's comprehension help teachers quickly gauge just how well students understand the material. Teachers can then tailor the following class to clarify and elaborate most helpfully for students.

Your learner log can be used to:

- Plan your study and make revisions as needed;

- Write down questions for your tutor as they arise;

- Make notes that will help you to carry out your study, e.g. on essay writing, preparing for examinations, previewing and reading texts in depth;

- Document your reading and viewing so that notes can be readily accessed for assignments and examinations; and

- Document your reflections on your progress, problems encountered and ways that you might resolve them.

Setting up a Log

A loose-leaf folder is recommended for your log. It can be divided into sections (use file dividers) and you can intersperse material that you collect with your hand written notes.

Organizing your Log

You will develop your own ideas on using the log but the following points may help you initially:

1. Date every entry.

2. Keep your factual writing (summaries, notes) separate from your comments and reflections. Use a different colored pen or the facing page for non-factual notes.

3. Set aside a section (use file dividers) in your log for questions to ask your tutor.

4. Set aside a section for recording readings, viewings and summaries.

Make an Entry in your Log

Start your log with a preview of your set text. Follow these steps to get you started:

➤ Give complete citation details in the manner recommended in the <u>referencing</u> section of the Study Help.

➤ Write half a page, in your own words, explaining what the book is about.

➤ Note down where you went to in the book to get the information you needed to do this task.

- Table of Contents

- Introduction

- Summary

- Dust Jacket

➤ At this stage, are there any criticisms you have of the book with regard to layout, your ability to access information quickly, etc?

The Learning Log – Retrieved 17.04.2004 from http:/wac.colostate.edu/intro/contens.cfm.

Appendix 4-D

Learning Log Frame for Classroom Work

Date: _____ Study Group: _____ Your Name _____

Learning Logs will be filled out at the end of class every night. If a student is not in attendance at the end of class and does not fill out their Learning Log, NO credit will be given.

1.What did you learn that was new or important?	
2. What did we discuss that you knew but now will look at differently?	
3. What do you feel was THE MOST important piece of information given?	
4. What can you take out of session and apply at work starting tomorrow?	
5. What frustrated you or caused you grief?	
6. What would you have done differently?	
7. What is the link with the things you've learned before?	

Other comments:

Learning Log Frame - Retrieved 17.04.2004 from http:/www.avidcenter.org.

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Appendix 4-E

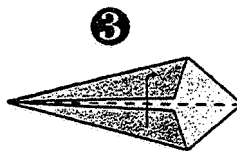**Construction tasks: making origami figures, wire-figures, or paper flowers.**
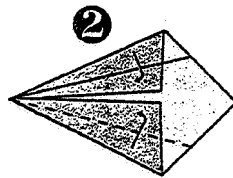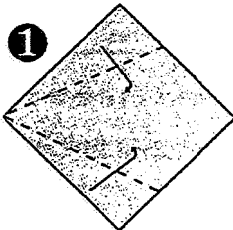
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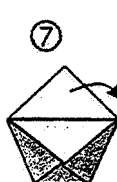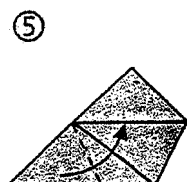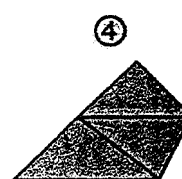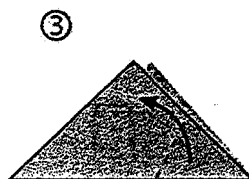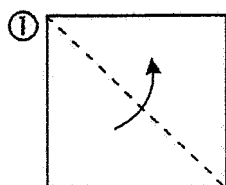
ATTENTION! Punctuality and preciseness in reading the construction drawing and folding the paper are a must for successful work.
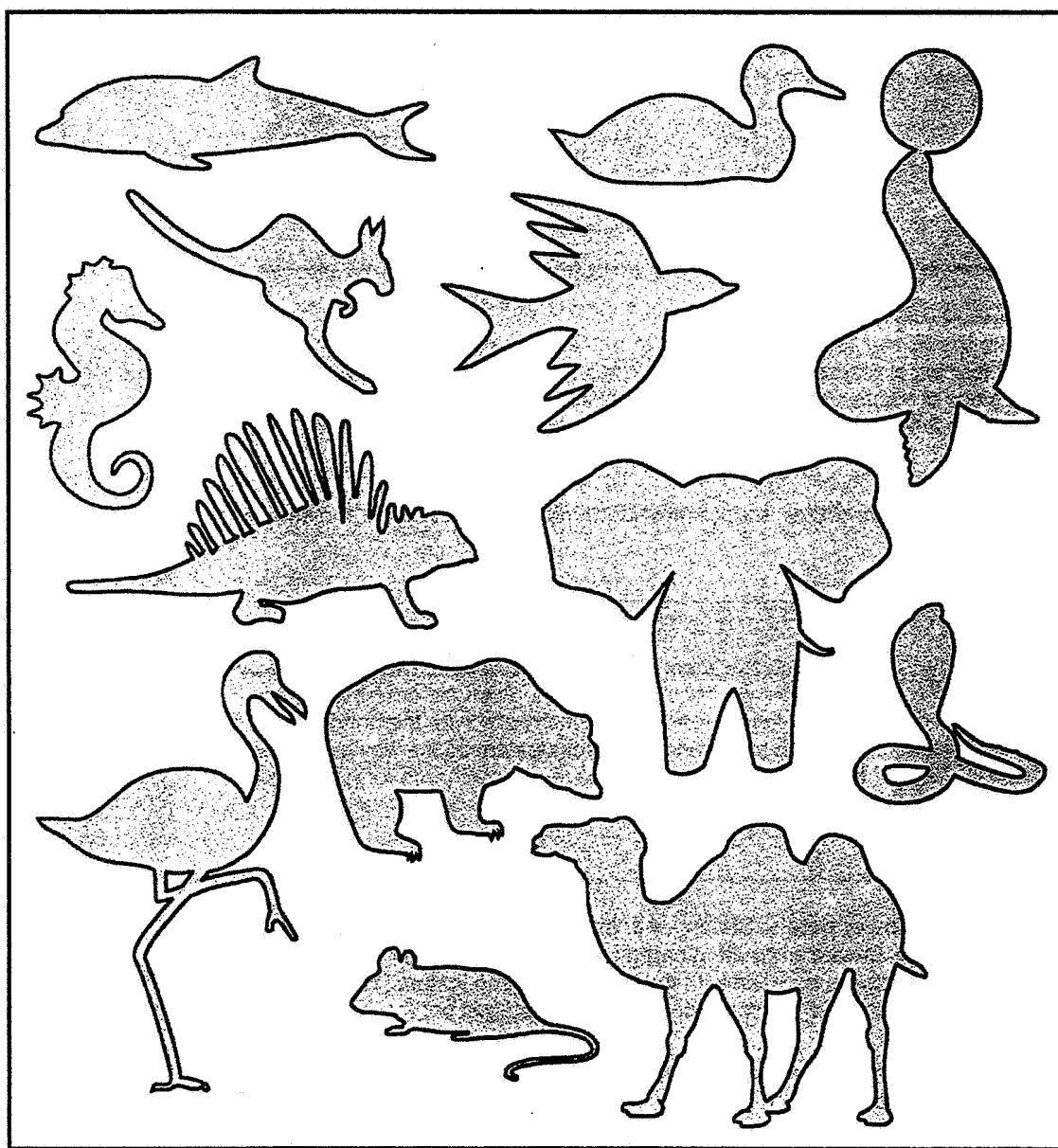
WHIRL
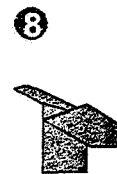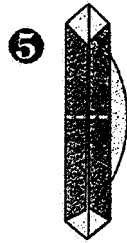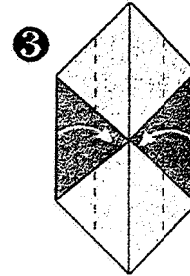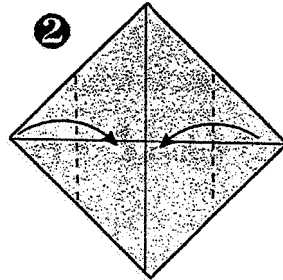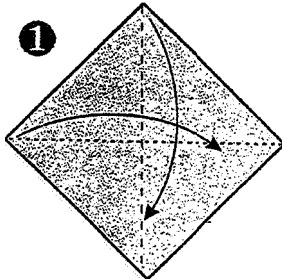
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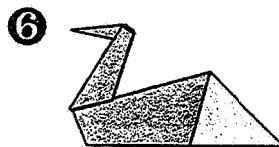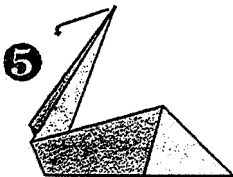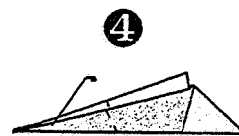
Mitrovska, M. Ivanovich D., Nikolovski B., & Stevanovski G., (2002), *Technical education for fifth and sixth grade.*
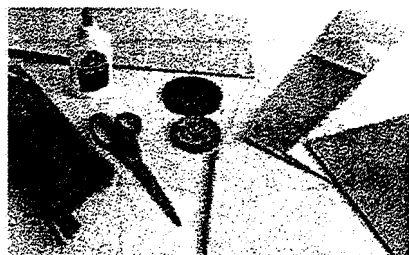
Construction tasks: "Wire-figures"

Mitrovska, M. Ivanovich D., Nikolovski B., & Stevanovski G., (2002), *Technical education for fifth and sixth grade.*

Making a tissue paper flower:

Materials:
- White or Colored Tissue Paper
- Green Chenille Stems
- Green Construction or Crepe Paper
- 2 Round Lids (one smaller)
- Glue
- Scissors
- Pencil
- Needle

Materials Needed

Instructions:

1. Make the flower layers. You'll need to make eight total circle layers for your flower: four big circles and four smaller circles. The easiest way to do this is to fold a piece of tissue paper over until you have at least three layers. Then trace your lids on the tissue paper and cut out the circles. This way, you only have to trace and cut once.

After you cut out the circles, stack them neatly into a pile and center the smaller circles on top.
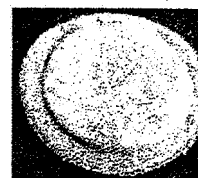
2. Attach the stem. Use a needle to poke two holes side-by-side in the center of your circles. Push the chenille stem all the way through as shown and make sure the bottom ends of the stem are even and the circles are all the way up against the top. Then twist the two stems together to form one solid stem.
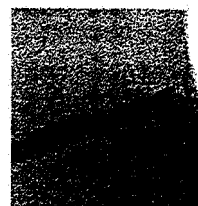
3. Crinkle the flower petals. Starting with the top layer of the circle stack, crumple the layer inward to create a carnation-like texture. Do this for each layer downward until you are satisfied with the "poofiness" and texture. The more the tissue paper is crumpled, the more defined the texture will be.

When you are finished crumpling each layer, your flower should resemble the second image here.

Petal Variations:
- Add a layer or two of a different color to make your flower more interesting.
- Use one color for the bigger circles, and one for the smaller circles.
- Cut the circles out with interesting edger scissors like Fiskars®.
- Instead of circle layers, draw flower petal shapes.

4. Add leaves. Make your flower look more realistic by adding leaves made from construction paper or crepe paper. To make the leaves, fold a piece of green construction paper in half and draw the leaf with the stem towards the fold. When you cut out the leaf, you'll have a two-piece symmetrical leaf shape attached at the stem.

Next, dab some glue on the underside of the flower near the chenille stem and lay the two-piece leaf on the underside of the flower as shown. Apply a small bit of glue to the underside of the leaf too, so it doesn't flop down when you turn the flower upright. Allow your flower to dry completely. Repeat steps to make more flowers, and put them into a nice classy vase when you're finished!

(Creativity Portal Playground, n.d.).

VIII. EVALUATION QUESTIONS

At the end of each day of the workshop, ask the following questions:

Evaluation Questions for End of Demonstration Activities Each Day

1. How can you use the strategies you have learned today to promote active teaching in your classroom?

2. What questions do you have about the strategies you have learned today?

Evaluation Questions for End of Entire Workshop

1. What in the workshop was most valuable to you?

2. What questions or concerns do you have related to applying of these strategies?

3. What would you change to make this workshop more meaningful?

4. What will change in your teaching as a result of this workshop?

5. What was your overall impression of the workshop?

    1 2 3 4 5 (1 = little   value   to   5 = great value)

6. Suggest topics that you would be interested in discussing in future workshops.

7. Please make any comments you wish about the workshop.

SECONDARY EDUCATION ACTIVITY

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